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No. 6

GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

MONTHLY REPORT

OCTOBER, 1937

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GOVERNMENT OF NORTHERN IRELAND

MINISTRY OF AGRICULTURE

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CONTENTS

PAGE

AGRICULTURAL CONDITIONS:—

THE CROPS, SUPPLIES AND PRICES 279
LIVE STOCK 283
THE COST OF LIVING INDEX FIGURE 285
THE MARKETS DURING SEPTEMBER 285

ARTICLE:—

The Future of Ulster Agriculture 286

MARKETING SCHEMES:—

Agricultural Marketing (Pig Industry) Act, (N.I.), 1934:—

PIG PRICES FOR OCTOBER, 1937 292
GRADING STATISTICS 294
COST OF STANDARD PIG RATION 295

The Agriculture Act, 1937:—

LAND FERTILITY SCHEME 296

Milk and Milk Products Act (Northern Ireland), 1934:—

ELECTION OF PRODUCERS' AND DISTRIBUTORS' MEMBERS TO THE JOINT MILK COUNCIL 297

The Cattle Industry (Emergency Provisions) Acts, 1934 and 1935, and The Livestock Industry Act, 1937 299

Wheat Act, 1932:—

THE NEW QUOTA PAYMENTS ORDER 302

PAGE

AGRICULTURAL NOTES:—

SEASONAL FARM NOTES 303
SEASONAL LIVESTOCK NOTES 305
SEASONAL GARDEN AND ORCHARD NOTES 307
SEASONAL POULTRY-KEEPING NOTES 308

ANNOUNCEMENTS AND REMINDERS:—

GENERAL 311
LECTURES 312
SCHOLARSHIP WINNERS, 1937 312
SCHOOL NEWS 313
FIFTEENTH EGG-LAYING TEST—AWARDS 314

AGRICULTURAL PRICES:—

FEEDING STUFFS AT SPECIFIED CENTRES 320
FEEDING STUFFS (WITH CALCULATED VALUES OF PROTEIN AND STARCH UNITS) ... 321
FERTILISERS AT BELFAST STORES 326
FAT STOCK AT BELFAST AUCTION MARTS 326
LIVE STOCK AT FAIRS 327

AGRICULTURAL TRADE RETURNS:—

SHIPMENTS OF LIVE STOCK FROM NORTHERN IRELAND PORTS 328
IMPORTS AND EXPORTS OF AGRICULTURAL PRODUCTS 329
NUMBERS OF CATTLE AND ACCOUNT OF TRADE AT FAIRS 330

MINISTRY OF AGRICULTURE

MONTHLY REPORT

OCTOBER, 1937.

The excellent weather since the commencement of October has been generally appreciated, and by none more than the farmer. Late harvesting work is being rapidly done under favourable conditions, and the season for reaping has almost ended with satisfactory results. That there is much to be thankful for at this time, when the autumn leaves are falling and the stackyards and stores are being filled with the fruits of the earth in goodly quantity, is perhaps more often felt than expressed. It will, therefore, be in keeping with the season if a little retrospective thought is recorded here in order that a fuller and keener appreciation of our indebtedness to nature is obtained.

This year has been a rather unusual one, fraught with many difficulties. A very late spring, made late by circumstances beyond the control of the farmer, was followed by a season of open and congenial weather most suitable for the growth of crops and grass. A damp, warm July, made good to a large extent the deficiencies caused by the enforced lateness of sowing and planting, and crops generally showed promise of reasonably good yields by the time the season of harvesting arrived. A protracted harvest made difficult by unsettled weather ensued, but now the crops are safely garnered and the results from the samples of wheat and oats already threshed indicate promising yields of grain of good average quality.

Crops of potatoes are good, and unless where grown on very wet soil and where efficient spraying was not carried out in good time, the proportion of diseased tubers is normal.

So far so good, now it may be asked, "What of the future?"

One of the main essentials of good harvests of both crops and stock is good fertility of the soil. The soil can only yield in proportion to the way it is fed. Lime and phosphate are two of the greatest-known factors in improving and maintaining soil fertility. The Government, appreciating this, has introduced a Land Fertility Scheme by which supplies of lime and of basic slag can be obtained at greatly reduced rates. There is, therefore, no excuse now for farmers to neglect, any longer, the maintenance of the fertility of their farms. Lime and slag should be applied during the autumn and winter, and applied not only to tillage land but to grass land as well. The improvement of grass land is a national necessity by reason of its being a necessary factor in improving the health and productivity, and increasing the output of live stock and live stock products which are the foundation of successful farming practice in this country. Farmers, are, therefore, strongly urged to take full advantage of the Land Fertility Scheme, which not only will be of benefit to each individually, but to Northern Ireland as a whole. Full stackyards, full storehouses, full byres of healthy cows and young stock, fully stocked pastures, even full fields of poultry, are all dependent on soil fertility, so that work done during the next few months in applying lime and phosphates is in the nature of a preparation for bigger and better harvests in the future.

12th October, 1937.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st OCTOBER, 1937.

Although the weather of last month was rather broken it was generally fairly favourable for farming operations, with the result that the prospects of a good harvest were somewhat further enhanced. In some respects September was like its predecessor, with showers mingled with fair periods, and, although conditions were damper and cooler on the whole, the rainfall and temperatures did not differ to any marked degree from the normal seasonal averages.

There were an appreciable number of heavy showers, and the wettest and coldest period was about the middle of the month ; but in the main the weather was open, and latterly bright sunny days presaged a late autumn.

Growing crops and pastures benefited from the moist and warm spells, and the general absence of severe night frosts was reflected in the excellent condition of grass lands, which continued to provide plenty of good quality keep. Only in exposed, hilly districts, and where the grass had not been kept well grazed, have pastures shown a tendency to lose their greenness.

Harvesting work suffered interruptions from the rains, and much of it was rendered slow and difficult, but very satisfactory progress was, nevertheless, made, and the bulk of the oat crop has been carted and stacked.

Cattle and sheep have remained in moderately good condition, and the general health of cattle is perhaps a little more satisfactory than a month ago.

"Felon" or "mastitis" among dairy cattle has decreased to some extent, but "hoose" is prevalent and has caused a few deaths of young cattle, and "redwater" is still a fairly common complaint. Some flocks of sheep have been troubled with liver fluke disease and footrot, but otherwise the bill of health is normally good.

Supplies of home-grown food are plentiful, and with the better harvest this season the outlook for the coming winter season is much brighter than a year ago. Purchased foods for stock continued ample for requirements but prices show no signs of cheapening.

Farmers have made a ready response to the offers of assistance made under the Agriculture Act, 1937, and already most, if not all, growers of grain crops have made application for the subsidy whilst, on account of its more immediate importance, the Land Fertility Scheme has attracted very considerable support. The next two or three months should, therefore, see much activity on the farm in connection with the application of lime and fertilisers.

THE CROPS.

WHEAT.—Some fields of spring-sown wheat have been very late in ripening and cutting has not yet been completed. The wet weather periods caused much difficulty with the work of cutting and stacking but, notwithstanding, good progress was made with this work. Most of the crop has been satisfactorily harvested and is now in stack.

Threshing has commenced in many districts and is proceeding with satisfactory results. The quality of the grain is mostly good and, although the yields in the main are slightly under average, on a number of farms where the soil is of rich quality they have ranged from 25 to 27 cwt. to the acre.

OATS.—The greater portion of this crop has been cut, and only in a few districts where the crop has been particularly late in ripening has this work to be done. The showery periods handicapped farmers with the harvesting work, but rapid progress was made towards the end of the month when more settled weather conditions prevailed. It is estimated that only about ten per cent. of the crop remained to be cut at the end of September. Most of the crop was saved in good condition, and although threshing has commenced only in the early districts it is reckoned from the results that the yields will be of good quality generally and up to average dimensions. This forecast relates particularly to oats grown on lea land which, generally, were better looking crops than those grown on potato ground. It was also learned from several districts that the yields of straw will be higher than usual.

Small lots of last season's crop of white oats were marketed during the earlier part of last month at firmer prices around 9/7½d. per cwt. Latterly supplies of this season's crop have been offered in fair quantities at prices ranging from 6/8d. to 9/- and averaging 7/- per cwt.

BARLEY.—The handling of this crop also was rendered difficult and tedious by the rainy periods, but eventually all of it was cut and stacked satisfactorily. The yields will be rather poor in some districts where the crop was thin, due

to bad weather conditions in the spring, but elsewhere fair results are anticipated. Threshing has not yet commenced. Wild birds are stated to have caused a considerable amount of damage to the crop in some districts.

Flax.—Here again wet spells added to the work of harvesting and some damage was done to the freshly spread flax by the heavy rains. The greater proportion of the crop was, however, harvested in good condition. Some of it has been carted to the mills and scutching has commenced in a few districts. The quality of the fibre is generally good and the bulk is expected to reach average dimensions, but some less optimistic reports suggest that the results may reflect the very bad weather during the early part of the season.

Potatoes.—The plants have grown out well and on many farms there is every prospect of excellent results. Blight disease, which spread slowly but was fairly general throughout the country towards the end of August, did not make much further headway last month on account of the preventive measures in the form of spraying which were taken by most farmers; the cooler temperatures prevailing last month also checked the spread of the disease. In general, therefore, blight may be regarded as having caused less damage than in recent years. Where second and third sprayings were carried out, and this precaution appears to have been taken more extensively than usual, the haulms have been allowed to develop and mature naturally. In some districts, however, where the wet weather of July interfered with spraying work and with the moulding up of the crop a second time, a considerable proportion of the tubers of the white varieties are showing signs of the disease. It is considered that on the whole the main crop will yield above the average and that the quality of the tubers will be good.

Second early varieties such as British Queen and Great Scot have been raised and the yields have been of average dimensions and the tubers of good quality.

The digging of the main crop varieties has commenced only in a few early districts, as elsewhere the plants have not yet ripened. Should good weather continue this work will be in full swing in a short space of time from now.

Supplies of the main crop varieties marketed for local consumption last month showed seasonal increases, and the total quantity was only slightly below that for September, 1936. Average prices at markets were firmly held up to the middle of last month, since when they have moved steadily downwards. The following figures show the weekly average prices at markets during the past six weeks and at the corresponding dates a year ago:—

Week ended	*Price per cwt.* s. d.		*Price per cwt.* s. d.
4th September, 1937 ..	2 11¼	Corresponding week, 1936	3 1
11th „ „ ..	3 1	„ „ „	3 7
18th „ „ ..	3 1	„ „ „	3 4½
25th „ „ ..	2 11¼	„ „ „	3 2¼
2nd October, 1937 ..	2 10	„ „ „	3 2¾
9th „ „ ..	2 8¾	„ „ „	3 4¼

There was a decrease in shipments of potatoes during the first half of September, but later in the month increased quantities were shipped. Weekly shipments recorded herewith show that recent shipments were much smaller than for last year.

Week ended	1937 *Tons*	*Week ended*	1936 *Tons*
4th September, ..	139	5th September ..	247
11th „ ..	153	12th „ ..	417
18th „ ..	234	19th „ ..	684
25th „ ..	606	26th „ ..	910
2nd October ..	738	3rd October ..	1,377

The shipping trade continued dull with prices showing no signs of improving. For the week ended 9th October prices per ton had an easier tendency and ranged as follows:—

	Bagged.	*Loose.*
Up-to-date (Red soil) ..	£2 10 0 to £2 15 0	—
Arran Banner ..	£2 0 0 to £2 10 0	—
Arran Victory ..	£2 0 0 to £2 10 0	£1 15 0
Kerr's Pink ..	£2 0 0	£1 15 0

MANGELS.—Some of this crop is backward and weedy and the yields in such cases may be low, but, in general, mangels have made good growth and are in a promising condition. It is predicted that the average yield will be of normal dimensions and the roots of good quality.

TURNIPS.—In the case of this crop also the reports vary to some extent and, although the majority are satisfactory, it is feared that on heavy and wet soils where weeds have made vigorous growth and retarded the normal development of the plants, the yields will be low. Elsewhere, however, and on light soils especially, very encouraging accounts have been received and excellent yields are likely to be obtained. The continuance of moist weather with spells of sunshine was very beneficial to the crop as a whole, and good growth was maintained during September, with the result that prospects of obtaining sufficient supplies of roots for the coming feeding season are very favourable.

Cabbage and Kale.—These crops are being grown on an increased scale for stock feeding. The season has suited them particularly well, and generally the plants are in a most promising condition.

Hay.—The remainder of the hay crop was cut and saved during last month and most of it is now stacked. The quality generally is good and the yields above the average. This applies perhaps a little more to upland than to meadow hay, but as a general rule the results have been very much better than last season in regard to both quality and quantity. Threshing of seeds hay commenced last month and is now in full swing; yields of from 5 to 7 cwt. per acre have been obtained.

Increasing quantities of perennial and mixed grass seeds were marketed during September, and the former was selling around 9/8d. per cwt. as against 17/3d. per cwt. last year, and mixed grass seed averaged 7/4½d. per cwt. compared with 12/- in September, 1936.

An increased quantity of upland hay was marketed last month and the average price per ton cheapened on the month by 5/3d. to 64/6d.

LIVE STOCK.

Cattle.—Stores made a fairly good thrive last month, and the health of the herds is generally satisfactory. "Hoose" was, however, slightly more prevalent among young cattle, and a few deaths have occurred. "Redwater" also has proved a source of trouble to many stock-owners.

Strong forward stores were fewer in number than usual at this time of the year and trade for these continued fairly brisk at slightly easier rates, but for other descriptions the demand deteriorated during the month and prices were generally appreciably lower. Cattle fattened on grass have made good progress, especially those hand-fed with concentrated foods. In some quarters it is the belief that the high price of stores has brought about a decrease in the number of cattle being fattened, whereas other opinions suggest that the numbers have increased. There is little doubt, however, that on the whole fewer cattle have of late been converted into beef, and this is confirmed by the returns of the number of animals certified under the Beef Subsidy Scheme which are given on page 299.

As a general rule the condition and health of the dairy herds is about normal for the time of the year, and the milk yield has shown the usual seasonal decline. Calving has perhaps been a little less satisfactory than usual judging from the number of complaints regarding abortion and sterility, whilst in some districts the number of cases of cows returning to service has shown no

signs of declining. On the other hand "felon" or "mastitis" which has been very bad this year has decreased in extent. Supplies of good dairy cattle were scarce last month and in keen demand, and nice young heifers and cows fetched improved rates.

Sheep.—Most of the animals have been maintained in a good healthy condition, and flock owners have generally been less troubled with outbreaks of disease than in recent years. There have, however, been a few isolated instances where liver fluke disease has appeared, while foot-rot has attacked some sheep grazed on land that suffered from the heavy rains. There is little doubt, however, that with the more systematic attention now being paid to these seasonal complaints the outbreaks are being confined to small dimensions.

Seasonally larger supplies of sheep and lambs continued to be offered at fairs and sales, and, although the demand was a little easier last month, good quality breeding sheep, and lambs for feeding remained in firm favour at prices ruling above those obtained at the corresponding date last year.

Pigs.—Supplies of young pigs marketed last month were barely sufficient for the demand, and dearer rates prevailed. Prices generally were about 2/6d. per head dearer on the month at around 34/- each for young pigs from 8 to 12 weeks' old. The small offerings of sows for breeding encountered a fairly good trade at prices ranging from £5 to £10 each for first litter animals and higher rates for second litter sows of good quality. Good, firm, fat sows for slaughter were a fair trade towards the end of the month. Prices for store pigs were firm. The demand for pork was fairly steady throughout the month and supplies were sufficient for requirements.

Horses.—Trade has declined somewhat, chiefly on account of the duller demand for ordinary farm horses which were, however, little changed in price at from £15 to £25 each. Good young horses of the draught type were selling at prices ranging up to £60 each, and first quality strong horses for farming were a little easier at from £35 to £50 each. Foals were fetching from £15 to £25 each.

Milk.—It was generally the case that the decline in the milk yield continued at a seasonal rate. Creameries paid from $3\frac{3}{4}$d. to $4\frac{1}{2}$d. per gallon for milk delivered for manufacturing purposes — the separated milk being returned to the farmer. The rate of equalisation payment for milk produced in Northern Ireland and delivered to creameries for manufacturing purposes has been determined at 0.36d. per gallon for the month of August, 1937, in accordance with the Milk and Milk Products Act (Northern Ireland),

1934. It should be noted that under the Regulations creameries are required to distribute the equalisation payments in accordance with the butter-fat content of the milk received from each supplier.

THE COST OF LIVING INDEX FIGURE.

The cost of maintaining unchanged the pre-war standard of living of working-class families at September 1st, was 55 per cent. above the level of July, 1914, or the same as that at July 31st, 1937, but 8 points above the figure recorded at September 1st, 1936.

At September 1st the general level of retail prices of food in Great Britain and Northern Ireland, as ascertained by the Ministry of Labour, was 40 per cent. above that of July, 1914, as compared with 40 per cent. at July 31st, 1937, and 31 per cent. a year ago. Increases were recorded in prices of eggs, butter and bacon, and in some areas the price of milk advanced. These upward movements were offset by further seasonal reductions in the prices of potatoes.

THE MARKETS DURING SEPTEMBER.

There were further seasonal increases in supplies of the principal vegetables marketed last month, and price movements in most instances showed a somewhat firmer tendency. Cabbage rose in price by 1½d. to 1/1½d. per dozen, while the new season's supplies of savoys fetched from 1/- to 1/9d. per dozen, and cauliflowers from 1/6d. to 2/6d. per dozen. Leeks, however, were ¼d. cheaper at 5d. per bunch, and parsley was reduced by 3½d. to 9½d. per bunch. Increased supplies of new season's carrots, parsnips and garden turnips were marketed in Belfast during the month, and carrots averaged 12/- per cwt., parsnips 11/- per cwt., and garden turnips 2/4d. per cwt.

Supplies of farmers' print and lump butter were larger and 2¼d. dearer on the month at 1/2¾d. per lb. for print butter, and 1/0¼d. per lb. for lump.

There were increased supplies of hen eggs marketed in September, and duck eggs were also more plentiful than a month ago. Prices improved on the month by 2d. to 11¾d. per lb. for hen eggs, and by 2/6½d. to 12/8¼d. per 120 for duck eggs.

In the poultry markets supplies of hens, chickens, and ducks were more numerous than in August. Hens were ¾d. dearer at 1/7d. each, but chickens and ducks declined in value by ¼d. and 3d. each to 2/5d. and 2/4d. each respectively.

Supplies of wool were smaller than a month ago, and long, unwashed wool was ¼d. dearer at 1/1d. per lb., and mountain, unwashed wool ½d. dearer at 1/- per lb.

THE FUTURE OF ULSTER AGRICULTURE.

The Broadcast Speech by the Rt. Hon. Sir Basil Brooke, Bart., D.L., M.P., Minister of Agriculture, on this subject given from the Northern Ireland Regional Station on the evening of the 1st October is reprinted here by kind permission of the British Broadcasting Corporation.

I am very glad to have once again the privilege of inaugurating the winter series of agricultural talks and discussions from our Northern Ireland station. Continuous efforts are being made by the British Broadcasting Corporation in conjunction with others to increase the usefulness of its agricultural programme, and generally speaking, to do everything possible to make it of the maximum benefit to the farming community. Both the British Broadcasting Corporation and the Ministry are very anxious indeed to receive from farmers suggestions as to what each could do to improve the usefulness of the agricultural broadcasting service.

My greatest satisfaction this evening lies in the fact that I have an opportunity of talking to a very large number of my fellow farmers and of saying something to them concerning the future of our agricultural industry which will, I hope, be helpful and which will enable those who think ahead to make their plans with as much confidence as possible.

Whoever is entrusted with the task of leading an agricultural community and planning its policy must necessarily survey a very wide field stretching thousands of miles away to the great agricultural countries across the seas. Despite immense distances the far corners of the world are becoming nearer and still nearer to each other in point of time, and what is happening to-day on the prairies of Western Canada or the big ranches in the Argentine will affect almost immediately the welfare of even the humblest farmer in Counties Tyrone and Fermanagh. That is one part of the picture. It is also essential to study carefully what changes are taking place in the social and economic conditions of the people in the great industrial areas of Britain which constitute the market for our agricultural produce. And so it comes about that the task of the Ministry of Agriculture is not so simple as many people seem to think. To know how to grow potatoes, feed dairy cows, feed hens for egg production and pigs for bacon, is very useful, indeed essential, but it is only a small part of the equipment necessary for planning the development of our agricultural industry and carrying that plan through to success. It

was studies and knowledge of the kind I have mentioned which led the Ministry, shortly after it came into existence in 1922, to set out boldly with a policy of developing the livestock industry and improving the quality and marketing of these products. I was not your Minister until eleven years later, and therefore I can speak without any suspicion of claiming personal credit. During that period agriculture the world over went through a time of acute depression, how acute it was elsewhere very few farmers in Ulster realise. Think for a moment how much worse it would have been for us if we had not succeeded in bringing about such a marked improvement in the quality of our cattle, in doubling our sheep population, in doubling our poultry population and putting our eggs in the forefront of the British market. All this and much more was not carried through just because the Ministry passed Acts of Parliament and issued orders and regulations. Far from it. The programme was carried through successfully, and to the lasting benefit not only of the farming industry but the whole community because the thinking farmers of Ulster backed it, because the egg merchants, the potato merchants, and so on, all pooled their knowledge and experience with that of the Ministry and played their part, and a very important part, in securing success.

More recently still you have witnessed our pigs and bacon industry reorganised, and as a consequence the output of pigs trebled, the breed of pigs changed, new and modern bacon factories sprang up, and all in the incredibly short period of three or four years.

But I did not come to the microphone to talk to you about what has been done, but about what we must, working together, try to do in the future. My reason for illustrating what has happened is to drive home the lesson that if anything is to be accomplished there must be a policy, and that the aims and objects of that policy must be known to as many as possible and have not only their approval but their active support and co-operation. The Ministry can only do things if you understand why it is necessary to do them, the advantages to be gained, and above all, if you farmers help to carry the programme through.

I think the factor that stands out clearest with regard to the future is the soundness of our present policy of developing stock and stock products. That such a policy is a sound economic one and is the best means of keeping, and indeed increasing, the land under the plough is, I think, beyond question, and the extent to which our activities in this direction are being followed in Great Britain is ample confirmaton if any were necessary. To my mind our next step forward must be to increase our cattle population. The quality of our cows has improved enormously, but the numbers have remained more or less stationary round a figure of 250,000. I want to set off with the object of doubling that number in the next period of years. It is, I know, going to be a very difficult task,because the drain on our breeding cows

and heifers by cross-Channel buyers is very heavy. The temptation to sell is often great and our cross-Channel buyers always take the best. But whatever the difficulties may be we have got to overcome them. As one of the means of assisting this object I hope, shortly, to be in a position to give some further practical encouragement to the creamery milk suppliers. But it must be obvious to all of you that if we are to double our cattle population it can only be done by a rapid improvement in the quality of our grass land and by increasing the acreage under the plough in order to increase the amount of home-grown feed available for their winter keep.

Together with an increase in the number of our cattle there must be, of course, further improvements in quality. There is a limit to which the licensing of bulls and the purchase of high-class sires can assist in this, but I must warn farmers that I think we are approaching that limit, and that no further spectacular strides can be made in this direction until the quality of our pastures has been improved. It is a fact that the output of our grassland could be multiplied at least threefold if we would manage and treat it properly. An announcement has already been made as to the Government's assistance in this connection. Apart from the all important question of management which only the farmer can supply, the two raw materials necessary are lime and phosphates. For the next few years farmers are to be enabled to purchase lime at half the present cost and Basic Slag at three-quarters of its present price. I should like every farmer in this Province when sowing his land down in grass to apply 1 ton per acre of lime after ploughing for his nurse crop, and that when he has harvested that he will give his young seeds a good start with at least 5 cwts. per acre of a high grade phosphate. To those of you whose grassland is permanent I would merely remark that lime and phosphates at intervals of three or four years is even more necessary, because such land does not receive the benefit of the artificial fertilizer applied to rotation crops.

Now let me say something about management. The management of the grass land of his country is, with notable exceptions, not a credit to us. In fact, it is bordering upon a disgrace and most of us are mismanaging the greatest asset we have got. Who, travelling up and down our countryside, can fail to be horrified at the extent to which rushes and other poverty weeds are creeping over it ? In the majority of cases, but not all, the cause is soil poverty and mismanagement.

Now let me say just two things about the management of grazing land. The greatest asset the farmer has is the mowing machine and yet it is rarely used. I would commend to you two simple rules. Never understock your land. If the grass grows too rapidly for the stock, as is so often the case, shut off an extra field or so for hay. It ruins a pasture to under-graze it,

besides being very wasteful. The second rule is this: whenever you have grazed a field, as soon as you turn the stock out of that field put in the mowing machine to cut off all the rough stuff they have left, and carry this practice out in all your grazing fields and as far as possible throughout the year.

There is another side to agricultural policy besides increasing production and income, and that is avoiding waste and losses. If you were Minister of Agriculture and had to survey the whole situation as I have to do you would not be very long in coming to the conclusion that the greatest source of loss to our farmers is not the weather, unkind though it may be, but disease. The research which the Ministry carries out may do a great deal to cure these diseases, and to help you in avoiding them. But there is only one satisfactory method of dealing with disease, and that is prevention. All our investigations and accumulated knowledge show that we farmers, if we will take and practise the advice given to us, can do more than all the drenches, medicines, and vaccines combined in keeping our stock healthy. If you go on to a farm of land which has been well limed you will find that the losses through disease are very much less than elsewhere. Lime rarely gives you bigger crops or more grass; it is a soil sanitary agent but it does give you better feeding value in your crops and healthier and stronger animals. If you will combine with the practice of liming this important principle of management, to keep your pigs, your sheep, your poultry and your cattle following the plough, you will be astonished at the improved health of your stock, and at the rapidity with which your losses through disease disappear.

Let me make this just a little clearer. I have no faith in the purely pig farm or purely poultry farm. All goes well for three or four years, sometimes longer, and then trouble taking the form of heavy losses, through disease, begins to appear. The reason is simple. The specialised pig farmer is using all his available grass land for his breeding sows and gilts. Many of the pests which afflict pigs, poultry, sheep and cattle have to go through a part of their lives in the soil before they go back into the pig, hen or sheep, as the case may be. By having sows or poultry constantly on the same field we multiply the infection enormously. There is only one solution—the plough—which interrupts the life cycle of the pest and cleans the land. That is why my faith is pinned to the mixed farm and that is why I say to you that we must lime, and that our cows, our sows, and our poultry flocks must have fresh land; in other words, follow the plough if we are going to cut down the great losses due to disease.

I have tried to tell you as simply as I can and without using any figures my thoughts and ideas on the subject of increasing our cattle population, and the very intimately related problem of a campaign for the improvement of the fertility and quality of our grass land. Now I am going to give you two

figures. First, that we Ulster farmers spend over £3,000,000 every year in buying feeding stuffs for our stock, and second, that we spend only about £300,000 a year in purchasing fertilizers for our land, and that the greater part of the fertilizers purchased is applied to such arable crops as potatoes, turnips and flax and not to the grass. I want you to think over these two figures very carefully. I will tell you what they mean to me and later on I hope to have an opportunity of discussing them further with some of you.

£10 spent on feeding stuffs for every £1 spent on fertilizers seems to me to afford ample evidence of my hard but nevertheless true statement that we are neglecting our grass lands. Secondly, this very big expenditure on buying feeding stuffs (and it is rising with every increase in our pig and poultry population) raises the question as to whether we are doing all that we could to grow feeding stuffs for our stock on our own land. We shall always have to buy some feeding stuffs, but we could do a great deal to reduce our purchased feeding stuffs for pigs if we grew a great deal more barley. Do you know that 130 years ago the chief cereal grown in Ulster was barley, and that it is difficult to grow successful crops of barley to-day except in specially favoured places ? The reason is that 130 years ago our great grandfathers and their fathers before them used to lime regularly. Our soils have now become too sour to grow barley. The assistance, amounting to half the cost, which is being given to farmers who apply lime to their land should make it possible for us to grow more barley, and thus make our expanding pig population much less dependent upon purchased feeding stuffs—barley, potatoes, and milk make an almost perfect ration for pigs. Whilst I would like to see a rapid increase in the area under barley let me make it quite clear to you that it is no use trying to grow barley unless you have first limed your land.

If you think over what I have been saying to you in this talk you will realise that these apparently very different things such as possible further assistance to creamery milk producers, lime at half cost, cheaper slag, cattle subsidy, are not all disconnected items of help. They all fit into and are essential parts of one policy—a rapid increase in the numbers and in the quality of our livestock population.

And now I should like to say a personal word to you as your Minister of Agriculture. During the past few years there has been an increasing demand by farmers that the State must give assistance to our industry, and I agree that the demand was a just one and that help was necessary. But with every item of assistance there has come louder and louder a cry against control. Let us as farmers face the issue frankly. There cannot be and there never has been State help without State control. If the State gives us help in order that we may do something it is the duty of the State to see that we do that

something. If the State failed to see that the object for which the money or assistance was forthcoming was carried out abuse would be rampant and Government and order would cease. I am sure the vast majority of my farmer friends know this perfectly well, but I want you all to realise that fundamental truth. Let me make a simple illustration. What would the public say to me if having secured lime for you at half price for the purpose of applying it to the land I did nothing and farmers used the lime for white-wash or sold it to builders or others at a profit.

And now a last point. I want you all to realise that the Minister of Agriculture and the Ministry of Agriculture are servants of the people. No matter how good our schemes may be they are unlikely to please all. Let us suppose that Scheme No. 1 pleases 90 per cent. but that 10 per cent. are dissatisfied. Scheme No. 2 may be equally well thought of, but unfortunately the 10 per cent. dissatisfied will be different people from the previous 10 per cent., and that gives 20 per cent. with a grouse. You will see that by the time I have got 7 or 8 schemes in operation although each one of them may have the support of an overwhelming majority I have, nevertheless, got 70 per cent. or 80 per cent. who have got a grouse against one or other scheme and who may often, I fear, remember the one grievance and not the more numerous benefits. That is one of the difficulties of a Minister of Agriculture, and I would like you to ponder over it, because if one wants an easy life and to be popular then the best thing is to do nothing, but if one wants to accomplish something that is really helpful and of lasting benefit then it is necessary to act firmly on a well considered policy. Why do I tell you this ? Well, simply in order that you may understand and that when you come to judge it may help you to judge broadly and not on narrow personal issues.

MARKETING SCHEMES.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.), 1934.

PIG PRICES FOR OCTOBER, 1937.

Issued by the Pig Industry Council for Northern Ireland.

PRICES FOR DEAD PIGS.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland in October, 1937, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Partly Black Pigs.
c.1.0.21 to c.1.1.13	66/4	63/4	60/4	56/4	
c.1.1.14 to c.1.2.3	70/4	67/4	64/4	60/4	5/-
Weight Class. (Dead Weight)	Grade A.	Grade B.	Grade C.	U.L. or U.F.	below
c.1.2.4 to c.1.2.14	70/4	67/4	64/4	61/4	relevant
c.1.2.15 to c.1.3.14	70/4	67/4	64/4	61/4	Grade
c.1.3.15 to c.2.0.0	67/4	64/4	61/4	58/4	Price.
c.2.0.1 to c.2.0.14	61/4	58/4	55/4	52/4	

Pig Carcases c.1.0.0 to c.1.0.20:—63/4.

Authorised cuts:—

(a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.

(b) Broken ham (wet break)—12½% of the gross value of the carcase.

(c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase is condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer, the appropriate grade price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply. If the carcase is wholly condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer the relevant Grade 2 or Grade B price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.0.0 or over c.2.0.14, and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs; smelling pig carcases with definite indications of putrefaction, and pig carcases badly abused or damaged before being handed over by the producer to the curer.

Prices for Wiltshire Pigs Sold on Direct Contract.

In the case of pigs sold alive under direct contract to Wiltshire curers the prices per dead cwt. payable for pigs delivered in respect of the month of October, 1937, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Unsuitable.
c.1.0.21 to c.1.1.13	76/4	73/4	70/4	66/4	63/4
c.1.1.14 to c.1.2.3	76/4	73/4	70/4	66/4	63/4
	Grade A.	Grade B.	Grade C.		U.L. or U.F.
c.1.2.4 to c.1.2.7	73/4	70/4	67/4		64/4
c.1.0.0 to c.1.0.20	Suitable 65/4		Unsuitable 63/4		
Over c.1.2.7	On the same basis as pigs sold dead.				

Prices for Live Pigs Sold to the Pigs Marketing Board (Northern Ireland).

In the case of pigs sold alive to the Pigs Marketing Board during October, 1937, the prices, according to grade, are as follows:—

Live Weight.	Grade 1.	Grade 2.	Grade 3.	Unsuitable.
c.1.1.14 to c.1.2.13	49/–	49/–	49/–	47/6
c.1.2.14 to c.2.0.0	57/3	55/–	52/9	U.L. or U.F. 49/9 — 47/6
c.2.0.1 to c.2.1.14	52/9	50/6	48/3	46/–
c.2.1.15 to c.2.2.7	50/6	48/3	46/–	43/9
c.2.2.8 to c.2.2.21	46/–	43/9	41/6	39/3

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0. to c.2.2.21 can be sold only to the Board.

Authorised Deductions.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy and contribution at present amounting to 3/-.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

In the case of pigs sold to the Board, there is a deduction of 2/6d. per pig for marketing charges.

GRADING STATISTICS.

Table showing the percentages of pig carcases falling within the weight and grade classes indicated during August, 1937.

Under 1.0.21		c.1.0.21 to c.1.1.13					c.1.1.14 to c.1.2.3					Totals
Suitable	Unsuitable	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	
1.63	.25	3.19	1.98	.84	.43	.02	4.87	6.26	3.91	2.08	.02	25.48

Grade A.				Grade B.				Grade C.				
1	2	3	4	1	2	3	4	1	2	3	4	
8.22	15.70	2.61	.65	7.09	17.59	3.59	1.16	2.69	8.62	1.44	.44	69.80

Ungraded Carcases.						
Under Grade A measurements. U.L.	Over Grade C measurements U.F.	Wholly condemned U1.	Wholly black, injured or damaged U2.	Overweights, boars, sows, etc. X.	Partly Black Y.	
.02	3.42	.03	.45	.77	.04	4.72
					Total	100%

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

The average price paid to producers for pig carcases during the month of August was £5 7s. 11d.; the average weight c.1.2.17; and the average price of pork £3 5s. 4d. per cwt.

The following table gives the percentage results of an analysis of the purchase and grading statements furnished by Wiltshire bacon curers in respect of live pigs delivered on direct contract by producers during the month of August, 1937.

Weight Class.	Grade 1.	Grade 2.	Grade 3.	Unsuitable U.L. or U.F.	Total
Under c.1.0.0 ..				—	.20
c.1.0.0 to c.1.0.20 ..				.10	4.73
c.1.0.21 to c.1.2.3 ..	39.64	30.18	12.07	3.22	85.11
	Grade A.	Grade B.	Grade C.		
c.1.2.4 to c.1.2.7 ..	1.21	1.91	.91	.40	4.43
c.1.2.8 to c.1.3.14	.90	2.52	1.71	.30	5.43
Over c.1.3.14 ..	—	—	.10	—	.10
				TOTAL	100.00

The average net price per cwt. in respect of these deliveries works out at £3 9s. 10d., after making allowance for insurance and contribution to the Pigs Marketing Board.

The average weight was c.1.1.15; the net average price per pig, £4 16s. 7d.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 18th September, was 10/1d. This figure has been calculated by the Ministry from returns collected from 10 representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based:—

Maize Meal	30%
Barley Meal	30%
Pollards (White)	20%
White Bran	10%
Meat Meal (60% Protein) ...	10%

THE AGRICULTURE ACT, 1937.

LAND FERTILITY SCHEME.

How to fill in Application Form L.F.C.7 for Grants in respect of Lime

In General—Write legibly and read over the form carefully.

Part 1. (To be completed by the supplier)—

Note: (i) The CaO content must be stated at (3). Lime producers and distributors are reminded that it is an offence against the Fertilisers and Feeding Stuffs Act to sell Burnt Lime or Ground Limestone without furnishing to the purchaser particulars of the Calcium Oxide percentage or equivalent contained in the Lime or Limestone sold. For an analysis of their Lime, producers should get into touch with the Analyst for their County. His name and address can be obtained from the Secretary to the County Council.

(ii) At (5) it must be made clear whether the lime is delivered to the farm or collected at the quarry or kiln.

(iii) The sum to be inserted at (6) will include transport costs where the point of delivery is the farm, and exclude them if point of delivery is the quarry or kiln. In the latter case, i.e., where transport is provided or paid for by the farmer, Part II of the Form should be completed by the farmer at (b).

Part II.—(To be completed by the occupier, or signed by him after it has been completed).

Note: (i) It is important that the occupier should give the full address of his holding, including the townland in which it is situated.

(ii) If the lime is delivered to the farm, "(a)" should be filled up and "(b)" should be struck out; if the lime is collected at the quarry or kiln "(a)" should be struck out and "(b)" should be filled up.

(iii) The farmer must state the acreage of the agricultural land on which the lime delivered has been spread, or will be spread within six months from the date of delivery, and must sign a declaration that he is the occupier of the land in question.

Part III.—(To be completed by the supplier).

Note: (i) The transport charges inserted at "(A)" should not exceed those which were being made before the Scheme came into operation.

(ii) "(B)" only applies to distributors, and producers should strike it out.

(iii) Producers are not concerned with "(b)" which should be struck out.

MILK AND MILK PRODUCTS ACT (NORTHERN IRELAND), 1934.

ELECTION OF PRODUCERS' AND DISTRIBUTORS' MEMBERS TO THE JOINT MILK COUNCIL.

The third election of members to the Joint Milk Council, established under Section 5(1) of the Milk and Milk Products Act (Northern Ireland), 1934, will be held in December next. Under Section 5(2) of the Act the Council is constituted as follows:—

Three members appointed by the Minister of Agriculture, of whom such one as the said Minister may designate shall be the chairman of the Council;

Three members appointed by the Minister of Home Affairs and being representatives of milk consumers;

Seven members elected, in accordance with the prescribed regulations, by holders of Producers' licences;

Four members elected, in accordance with the prescribed regulations, by holders of Distributors' licences.

The term of office of the members of the present Milk Council will terminate on the 31st December next, and, accordingly, it will be necessary to hold an election to determine the new representatives of distributors and producers. This election will be held next December, and the new Council will take office at the 1st January, 1938. The seven members to be elected in accordance with the prescribed regulations by holders of Producers' licences will be elected in respect of the following electoral divisions:—

(1) Two members elected by persons who hold Producers' licences in respect of premises situated in the electoral area comprising the Administrative County of Antrim;

(2) Two members elected by persons who hold Producers' licences in respect of premises situated in the electoral area comprising the County Borough of Belfast and the Administrative County of Down;

(3) One member elected by persons who hold Producers' licences in respect of premises situated in the electoral area comprising the County Borough of Londonderry and the Administrative County of Londonderry;

(4) Two members elected by persons who hold Producers' licences in respect of premises situated in the electoral area comprising the Administrative Counties of Armagh, Fermanagh and Tyrone.

New regulations have been issued regarding the election of members by holders of Distributors' licences, and for the forthcoming election the register will be divided into three divisions as follows:—

Division I.—Distributors who, on the last day for the giving of notice of election had contracted for the purchase of milk from one or more Producers, and who, on or before the 30th September, 1937, had remitted to the Ministry licence fees due in respect of not less than 100,000 gallons of milk purchased during the twelve months ended on the 31st August, 1937.

Division II.—Distributors who, on the last day for the giving of notice of election had contracted for the purchase of milk from one or more Producers, and were not entitled to be registered in Division I.

Division III.—All distributors who are not entitled to be registered in electoral Divisions I or II.

The number of members to be elected in respect of each of the foregoing divisions is as follows:—

Division I.—2 members.
Division II.—1 member.
Division III.—1 member.

The candidates for election in each division will be elected by the holders of distributors' licences who are registered in that electoral division. In the case of the election of members for the electoral divisions I and II, voters will be entitled to one vote for each gallon of milk purchased from one or more holders of Producers' licences during the twelve months ended on the 31st August, 1937, and in respect of which any Producers' licences payable by him had been remitted to the Ministry on or before the 30th September, 1937. In the case of voters in electoral division III, each voter will be entitled to give one vote.

Notice of the date of the holding of the election, and the last day for the receipt of nominations, and of the manner in which nomination papers may be obtained, will be published in the Press at least fourteen days before the last day for the receipt of nominations.

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935 AND THE LIVESTOCK INDUSTRY ACT, 1937.

The following table shows the numbers of Northern Ireland cattle certified for the subsidy during the months of March, April, May, June, July and August, for the past three years :—

Month.	Steers.	Heifers.	Cow Heifers.	Total
March, 1937	10,008	2,561	296	12,865
1936	9,923	2,762	284	12,969
1935	7,862	2,161	278	10,301
April, 1937	7,258	1,825	291	9,374
1936	8,736	2,565	339	11,640
1935	9,666	2,226	308	12,200
May, 1937	5,908	1,470	299	7,677
1936	7,122	2,077	311	9,510
1935	7,623	1,922	269	9,814
June, 1937	5,413	1,509	344	7,266
1936	7,282	2,451	372	10,105
1935	6,710	2,222	265	9,197
July, 1937	5,365	1,510	273	7,148
1936	6,759	2,138	269	9,166
1935	7,162	2,152	208	9,522
August, 1937	5,155	1,709	237	7,101
1936	7,347	2,466	226	10,039
1935	6,413	2,418	182	9,013
Total for quarter ended May, 1937	23,174	5,856	886	29,916
1936	25,781	7,404	934	34,119
1935	25,151	6,309	855	32,315
Total for quarter ended August, 1937	15,933	4,728	854	21,515
1936	21,388	7,055	867	29,310
1935	20,285	6,792	655	27,732

It will be seen from the above figures that the numbers of Northern Ireland cattle certified for the subsidy during the six months March to August of this year were below those recorded for the corresponding months in 1936 and 1935. The most appreciable decrease occurred during the past summer quarter, embracing the months of June, July and August, when only 21,515 head of cattle were certified. Compared with the previous year's total of 29,310, this represented a drop of 26.6 per cent. on the year, whereas the decline in the total number for the spring quarter months of March, April and May from 34,119 in 1936 to 29,916 this year was 12.32 per cent. The trend

of the total numbers certified in the whole of the United Kingdom was downward during March and April, but the increase in May was insufficient to raise the total for the quarter to the level for that of 1936, which was actually .35 per cent. higher at 419,508 animals. The returns for June were well down on the year, and although July figures recovered to slightly above the monthly total for 1936 the number, certified in August last, of 124,955 animals was again appreciably lower than a year ago of 131,794. The summer quarter's returns were, therefore, smaller than in 1936 by 4.82 per cent. at 370,805 head of cattle. Expressed as a percentage of the totals for the United Kingdom the Northern Ireland totals in the table on page 299 increased from 7.93 for the spring quarter of 1935 to 8.13 in 1936, and then fell to 7.16 this year, whilst the totals for the summer quarter declined from 7.69 in 1935 to 7.52 in 1936, and then dropped sharply to only 5.80 per cent. this year.

In addition to the monthly returns received from the Livestock Commission, from which the foregoing information has been extracted, the following interesting particulars have just been published in respect of adjusted numbers of cattle certified in the United Kingdom from month to month, together with the average prices and average weights of the cattle.

ADJUSTED FIGURES OF TOTAL NUMBERS OF CATTLE CERTIFIED IN THE UNITED KINGDOM.

The numbers of cattle certified each month, after being adjusted to make allowances for the numbers of each day of the week which occurred in the month, were as follow:—

Month.	1937	1936	1935	1934
January	149,218	144,232	133,897	—
February	148,459	148,139	133,355	—
March	139,494	143,732	137,356	—
April	144,547	146,373	138,690	—
May	137,042	140,519	138,763	—
June	121,550	126,686	126,714	—
July	134,623	130,604	119,491	—
August	119,427	133,490	123,387	—
September	—	142,287	141,030	123,602
October	—	152,841	142,713	119,971
November	—	143,213	138,418	117,709
December	—	137,238	128,763	116,358

It will be seen from these figures that the rate of marketing of fat cattle in August showed a considerable decrease as compared with July, and was lower than at any time since December, 1934.

The average prices per live cwt. of all cattle in respect of which payments of subsidy have been made have been as follows:—

	England and Wales.				Scotland.				Northern Ireland.				United Kingdom.			
	1937	1936	1935	1934	1937	1936	1935	1934	1937	1936	1935	1934	1937	1936	1935	1394
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
January	34 7	34 3	34 3	—	37 9	37 1	38 0	—	32 2	29 11	30 5	—	35 2	34 6	34 11	—
February	35 6	34 4	33 0	—	37 2	36 6	36 3	—	32 3	31 0	29 11	—	35 7	34 6	33 6	—
March	36 11	34 3	32 7	—	38 3	35 5	35 2	—	33 4	31 4	29 0	—	36 11	34 4	32 10	—
April	39 6	35 0	33 1	—	40 9	36 1	35 2	—	36 9	30 11	28 10	—	39 7	35 0	33 3	—
May	42 9	36 0	34 6	—	44 7	36 7	36 6	—	41 11	32 1	30 0	—	43 2	35 10	34 8	—
June	43 7	38 0	35 7	—	45 9	39 3	37 11	—	41 11	34 3	31 5	—	44 1	38 1	35 11	—
July	42 7	37 4	34 11	—	48 3	39 2	39 2	—	40 9	33 1	31 0	—	44 10	37 6	35 6	—
August	41 6	36 5	33 0	—	47 10	39 0	36 8	—	39 9	33 6	30 1	—	42 8	36 9	33 7	—
September		34 7	32 6	36 1		38 0	35 5	39 10		31 5	28 6	32 8		35 1	32 10	36 9
October		33 2	31 10	33 11		37 3	34 8	38 0		29 11	27 4	30 5		33 8	32 0	34 8
November		32 4	31 7	32 10		37 5	35 7	37 9		29 0	26 9	29 2		33 0	31 11	33 8
December		34 6	34 2	34 7		38 5	37 3	38 7		30 1	28 0	30 0		35 0	34 5	35 1
Average		34 11	33 4	—		37 5	36 6	—		31 4	29 2	—		35 3	33 9	—

NOTE—The average prices shown above are calculated on the gross weights of the animals as weighed at the markets. In all similar statements issued by the Cattle Committee prior to 1st August, 1937, the net weights paid on, i.e., after the deduction of ¼ cwt. per head, were used, and in consequence in these earlier statements the prices were shown as from 10d. to 1/5d. per cwt. higher than those given above.

The average live weights of the cattle in respect of which payments were made by the Commission during August were as follows:—England and Wales, 9 cwt. 1 qr. 21 lb.—the same as in July, but 6 lb. lower than in August last year; Scotland, 9 cwt. 2 qr. 23 lb.—9 lb. lower than in July, but 3 lb. in excess of last year; Northern Ireland, 8 cwt. 2 qr. 8 lb.—7 lb. in excess of July, and 11 lb. in excess of last year. The average weights now quoted are calculated from the gross weights of the animals as weighed at the Centres and not, as in previous documents, from the nett weights on which payments were made.

The total amount paid to owners in respect of subsidy up to and including 25th September last:—

	No. of Animals	Total amount paid £ s. d.
Northern Ireland ..	365,764	762,676 4 3
England and Wales ..	3,392,924 ..	8,022,146 9 1
Scotland ..	1,033,161 ..	2,537,474 4 3

WHEAT ACT, 1932.

THE NEW QUOTA PAYMENTS ORDER.

In pursuance of the powers conferred upon him by the Wheat Act, 1932, and after consultation with the Wheat Commission, the Minister of Agriculture and Fisheries has revoked the Wheat (Quota Payments) No. 2 Order, 1937, which, as from April 18th, 1937, suspended the liability of millers and importers of flour to make quota payments under the Wheat Act, and has made two new Orders with reference to the cereal year 1937-38.

The first of these Orders—the Wheat (Anticipated Supply) No. 2 Order, 1937—prescribes the quantity of home-grown millable wheat of their own growing which the Minister anticipates will be sold by registered growers during the cereal year 1937-38 as 26,000,000 cwt. (approximately 5,780,000 qrs. of 504 lb.).

In the second Order—The Wheat (Quota Payments) No. 3 Order, 1937—the Minister has, after considering estimates furnished by the Wheat Commission and taking account of the surplus in the Wheat Fund at July 31st, 1937, prescribed that the quota payments shall be re-imposed in respect of deliveries of flour during the period commencing September 19th, 1937, at the rate of 2.4 pence per cwt. (equivalent to 6d. per sack of 280 lb.).

The new Quota Payments Order comes into operation on September 19th, 1937, and quota payments will accrue due at the prescribed rate in respect of all deliveries of flour taking place on or after that day.

In cases where flour or bread is exported on or after September 19th, 1937, the repayment of quota payments to the exporter will be made by the Wheat Commission at the prescribed rate, provided it is proved to the satisfaction of the Commission that quota payments have been duly made in respect of that flour or bread.

AGRICULTURAL NOTES.

SEASONAL FARM NOTES.

Potatoes.—The lifting and storing of main-crop potatoes will be proceeding on most farms at this time. Readers are reminded of the advantages of separating the saleable potatoes from the chats and diseased tubers at lifting time, and of the importance of proper storage of the tubers so that undue loss may not occur.

Storing in Pits.—Potatoes which are stored in pits should be well thatched with straw before earthing up is done so that they will turn out in a clean dry condition. Ventilation should also be provided for a time after pitting by leaving a space of from 8 to 10 inches at the apex of the pit and placing an extra layer of straw over this space for a week or two. By this time all danger of heating will have passed, when the extra straw can be removed and the earthing-up of the pit completed.

Storing in Houses.—Potatoes which are stored in houses should not be piled too deeply as, if this is done, heating and rotting may occur. The doors of the houses in which the potatoes are stored should be left open during the day-time, so that air may circulate freely throughout the house and provide additional ventilation.

Cleaning of Potato Ground.—The ground from which potatoes have been dug should be well harrowed. Any potatoes which are seen over the ground should be gathered and either stored apart from the main produce or used for feeding purposes.

Thatching of Stacks of Grain.—Stacks of oats and other grain crops should be thatched as soon as possible after being built to prevent unnecessary waste. The stacks should be allowed to dry on the outsides before thatching is done.

Mangels.—The lifting and storing of mangels should be completed as soon as possible so as to avoid possible damage by frost. The clamp can be made safe against frost by covering it with a thick layer of rushes, ditch cuttings, or old grass.

Winter Wheat.—Winter wheat should be sown when the ground is in a fit state, and before severe weather conditions set in. The earlier the seed is sown the better is the braird and the likelihood of a good crop. Varieties such as Queen Wilhelmina and Squarehead's Master, have given good results in

Northern Ireland, and are suitable for a variety of soils. The seed should be sown at the rate of from 14 to 16 stones per statute acre, and it is an advantage to dress the seed before sowing with "Ceresan" or "Agrosan G" at the rate of from 5 to 8 ounces per cwt. of seed as a preventive of smut and other seed-borne diseases.

Land Fertility Scheme.—As mentioned in last month's Report, the Land Fertility Scheme is now in operation, and farmers are again strongly advised to avail themselves of its provisions and thereby obtain supplies of lime and of basic slag at reduced rates. Basic slag is of particular value for the improvement of grassland, but, since it is slow in action, it should be applied during the autumn or early winter, if results are to be obtained in the following year's grazing. Accordingly, farmers who intend applying this manure, should obtain supplies as soon as possible. A dressing of from 6 to 8 cwt. per statute acre is recommended. On the lighter classes of soils the application of 1 cwt. 30 per cent. potash salts per statute acre in addition to the slag is necessary to obtain the best results.

It is important to note that where there is a mat of old grass or of fog, the pasture should receive a thorough harrowing before manuring is carried out, otherwise full benefits will not be obtained. Disc harrows and freshly-sharpened, straight-tined zig-zag harrows may be used for this purpose with very satisfactory results. The harrowing must, however, be done thoroughly so that the turf is cut up in lengthwise and crosswise directions.

The manuring of grassland is a sound investment since it not only increases the stock-carrying capacity of the pasture by promoting the growth of good grasses and of clovers, but it also encourages the production of herbage early in the spring, thereby shortening the winter feeding period and reducing the expenditure on purchased feeding stuffs. A further advantage is that the feeding value of the pasture is increased, and stock grazing on it will, therefore, obtain a benefit.

Destruction of Rats.—At this time of the year rats take up their winter quarters in farm buildings and in stackyards. These pests are responsible for considerable damage and loss each year, and the employment of destructive measures is a work of importance which should not be overlooked. The use of poisoned baits is a convenient and effective method for destroying rats. Various proprietary poisons can be obtained, and many of these give very satisfactory results. A cheap and efficient poison bait can be made up by mixing together equal parts of barium carbonate and dripping into a paste. The paste should be spread on pieces of bread and left in the rats' haunts. Barium carbonate can be obtained from any chemist.

When using poisoned baits, the greatest care should be exercised, particularly on farms, so that poultry and livestock cannot gain access to them.

Baits should be laid down at night, and any which have not been taken by the rats should be removed the following morning. The baits should not be touched by hand either when making or laying them.

SEASONAL LIVESTOCK NOTES.

Winter Rations.—The winter feeding of farm stock will soon commence, and the making up of suitable and economical meal mixtures for this purpose calls for consideration at this time. The high level of prices of feeding stuffs necessitates careful judgment in the purchase of foods so that those which offer best value for money may be obtained.

While it is possible to purchase proprietary cake and meal mixtures which will give satisfactory results, it is generally more economical to make up the rations on the farm. The latter practice is recommended.

In the making up of balanced rations it is necessary to include foods which are rich in protein. Such foods are the most expensive to buy and, accordingly, it is important to purchase those which offer best value for money, if an economical system of feeding is to be adopted. Full particulars regarding the composition and purchase of foods are given in the article on page 321 dealing with the prices of feeding stuffs, and farmers are strongly advised to study this article carefully, as it will assist in the making up of economical rations at current prices of feeding stuffs.

Examples of different types of rations for dairy cows are given in Leaflet No. 16, while Leaflets Nos. 35 and 45 give examples of suitable meal mixtures for feeding to fattening pigs and to sows and young pigs, respectively. For fattening cattle, a mixture of 2 parts by weight crushed oats, 2 parts by weight maize meal, and 1 part by weight decorticated earthnut cake, has given satisfactory results. A little linseed cake can, with advantage, be added to the ration during the last month of fattening. For young growing cattle from 2 to 3 lb. per head of a mixture of 2 parts by weight crushed oats, 1 part by weight maize meal, and 1 part by weight decorticated earthnut cake, along with good hay and roots, will maintain the animals in a forward thriving condition throughout the winter.

Sheep.—To obtain good breeding results, rams should be kept in a fit condition by feeding an allowance of concentrates. A mixture of equal parts oats, kibbled maize and linseed cake is suitable for this purpose. The breeding flock should also be changed periodically to different fields so that they may be maintained in a forward thriving condition.

Liver Fluke Disease.—Outbreaks of fluke in sheep should be guarded against by taking precautionary measures early. The animals should be

grazed on dry, well-drained fields, and kept off those which have marshy areas on which surface water lies. The use of carbon tetrachloride for the treatment of fluke is now common, and gives effective results. The correct dose is one cubic centimetre for each sheep. As bad results may follow the use of too large or too small a dose, only capsules guaranteed to contain the correct amount should be purchased. A guarantee of purity should also be obtained. In the case of sheep receiving hand-feeding, this should be discontinued for at least four days prior to the giving of carbon tetrachloride, and grass alone allowed during this period. Further particulars regarding the control of liver fluke disease are given in Leaflet No. 24.

Footrot.—Footrot is also liable to be a source of trouble in sheep flocks at this season and immediately signs of lameness are noticed the affected animals should be examined and treatment given. If the trouble is neglected and suppuration allowed to set in, the difficulty of effecting a cure is increased. A simple and effective dressing for footrot is a solution of 1 lb. copper sulphate ("bluestone") in 1 gallon of water, which should be applied after the horn part of the hoof has been well pared with a knife. In severe cases it is advisable to trim the foot thoroughly and then to apply a dressing consisting of 1 oz. powdered copper sulphate, 1 oz. turpentine, and ½ lb. of lard, after which the foot should be bandaged. Further information on the treatment of footrot is given in Leaflet No. 63.

Pigs.—The advantages of utilising potatoes in pig rations may again be stressed. Potatoes are low in price, and their inclusion in the ration will reduce feeding costs considerably. Moreover, at this season of the year there will be quantities of "chats" and refuse potatoes on farms where the correct practice of sorting the potatoes at the time of lifting is carried out, and the most profitable method of disposing of these is to feed them to pigs. For pig feeding purposes, potatoes should be boiled, and, provided they are used in the correct proportion along with a suitable meal mixture, satisfactory results will be obtained. Examples of suitable meal mixtures for use along with potatoes are given in Leaflet No. 35.

Sows with litters require careful attention during the winter months. Good housing and suitable feeding are essential, if best results are to be obtained. The houses should be dry and warm, have adequate ventilation without draughts, and be capable of being easily kept clean. Sows suckling litters should be liberally fed so that the flow of milk may be encouraged. The provision of fresh green food should not be overlooked, while an occasional raw turnip or mangel is beneficial. Full particulars regarding the feeding and management of sows and litters are given in Leaflet No. 45. This leaflet also deals with anaemia or bloodlessness in young pigs, a condition which is liable to occur during the winter months.

SEASONAL GARDEN AND ORCHARD NOTES.

Lifting and Storing of Carrots and Beet.—Carrots and beet should be lifted now. Care should be taken to see that no injury is caused to the latter during lifting; the leaves should be removed by twisting instead of by cutting. Both carrots and beet should be stored between layers of sand or fairly dry soil in a moderately dry place, where they will not be exposed to the winter rains.

Parsnips.—Parsnips may also be lifted now and stored in the same way as carrots and beet, but generally they are allowed to remain in the ground and lifted as required. When periods of severe weather are expected, a supply of roots sufficient to do a fortnight or so should be lifted before the ground becomes frozen too hard.

Potatoes.—The digging and storing of main crop potatoes should be completed as soon as possible. If the tubers are being stored in houses, care must be taken to ensure these being frost proof. The "seed" for next year should be selected at digging time and placed in sprouting boxes. The houses in which the "seed" potatoes are stored should not contain any other plants, and aphides or "green-fly" should be kept in check by periodically fumigating the houses with nicotine. It has been shown that if aphides gain access to the young sprouts they are liable to infect the tubers with virus diseases, such as leaf-roll.

Digging and Trenching.—As the vegetable ground becomes vacant it should be dug or trenched and manured as required. Garden refuse such as leaves, decayed annual weeds and soft (not woody) rubbish, may be incorporated with the soil as the work proceeds.

Celery.—If not already done, the final earthing-up should be carried out without delay. Make the soil firm around the neck of each plant and then slope the soil with the spade so that the rain is thrown away from the plants If this is not done, rotting is likely to take place in the centre of the plant.

Apples.—The picking and storing of apples and pears should be completed as soon as possible. Only sound fruit should be stored. Windfalls and badly-blemished fruit should not be brought into the store, but should be disposed of as soon as possible.

There seems every reason to believe that the demand for large clean apples will be good in Great Britain this season, and growers should take every care that their crops are properly handled and stored. Every year much loss is caused by careless picking, handling, and storing. The apples should be stored in open cases (which can be tiered one above the other), and not in heaps on the floor.

Planting Fruit Trees.—Supplies of fruit trees and bushes should be ordered from nurserymen without delay. By ordering early there is a greater likelihood of obtaining satisfactory plants than if the order is placed late in the planting season. Planting can be carried out from now onwards whenever the soil is in suitable condition. Notes on planting, and a list of varieties of the different fruits recommended, are given in Leaflet No. 15.

Pruning.—If the removal of the old fruiting wood of black currants, raspberries and loganberries, was carried out immediately after the fruit had been gathered as advised, there should be little to do now beyond the removal of those branches and canes which are overcrowding. The raspberry and loganberry canes retained for next year's fruiting should be tied into position as soon as possible. Useful notes on raspberry culture are given in Leaflet No. 71.

Flowering Plants.—Such plants as dahlias, begonias, geraniums, etc., should be lifted before they are damaged by frost. The tubers of the two former should be stored in a frost-proof building, while the latter may be potted up and grown on in a glass-house for the winter. Chrysanthemums, grown in the soil out-of-doors during the summer, should now be lifted and replanted in the soil of the glass-house. The house should be kept closed and moist for a couple of days after planting until the plants begin to root again. After this, ample ventilation should be given on all favourable occasions.

Glass-houses.—These should be thoroughly cleaned as they become vacant, using a good disinfectant such as emulsified cresylic acid for the purpose. The ventilators must be kept wide open while the work is in progress but afterwards they should be kept closed for at least 48 hours. The houses must be then well ventilated before green plants are again brought into them.

Bees.—As a preventive measure against Acarine disease, bee-keepers should treat all the stocks with "Frow's Mixture" early in the winter, as this disease is still prevalent in the country. Particulars of the life history of the causative organism of Acarine disease, and of the method of treatment, are given in Leaflet No. 76.

SEASONAL POULTRY-KEEPING NOTES.

Feeding and Management of Pullets.—Profits from poultry-keeping depend largely on the egg production obtained from now onwards when the prices are highest. Every effort should be directed, therefore, to the encouragement of production in the laying flock. Liberal feeding combined with comfortable and adequate housing aid in promoting full production.

As the days shorten, the time available for feeding is reduced, and there is often difficulty in getting the birds to consume sufficient food for their requirements. The provision of a hopper of dry mash which should be available to the birds at all times, of a daily feed of mash wet with separated milk, and of a feed of grain in the evening just before the birds go to roost, will help in overcoming this difficulty.

Forcing Foods.—It is important to guard against the feeding of excessive amounts of forcing foods containing a high proportion of protein material in an effort to promote egg production. Forcing foods, if used in excessive amounts, may undermine the stamina and health of the birds and a high mortality may result. Encouragement of egg production without loss of body weight should be aimed at. Full particulars regarding suitable mash and grain mixtures for winter egg production purposes are given in Leaflet No. 3.

Housing.—The houses for winter layers should be roomy, well lighted, well ventilated, but free from draughts. Overcrowding in draughty houses is a predisposing cause of outbreaks of colds and other ailments in the flock which seriously interfere with production. The litter in the house should be changed frequently and a little grain scattered in it daily, so that the birds are encouraged to scratch through it freely. Damp, soiled litter is also a contributory cause of outbreaks of ailments appearing in the flock.

Limewashing.—The periodical application of lime wash, to which a small quantity of paraffin oil has been added, will be found to have a beneficial effect upon the general health of the birds, besides brightening up the house. Limewashing also aids in preventing infestations of parasites, such as red mites, lice and fleas. Parasites lower the vitality of the birds and may cause a falling off in production and vigour.

Breeding Stock.—The management and feeding of the birds selected for breeding require careful attention from now onwards. The birds should be given every opportunity of building up reserves of bodily vigour and, to this end, free range on fresh pasture is essential.

If portable houses are available, they should be used for the breeding stock. Such houses can be moved readily to a fresh portion of the field and thus the birds can enjoy the benefits of absolute free range, which is not possible with a fixed house even though it gives access to a large field over which the birds can range. About 2 square feet of floor space per bird should be allowed in portable houses.

Suitable feeding of the breeding stock is essential if good hatching results are to be obtained. The feeding should be such as will bring the birds into a hard, firm condition, without stimulating egg production. A daily feed of a

mixture of oats and cracked maize, and the addition of cod-liver oil to the mash at the rate of 1 pint to each 4 stones of mash are valuable aids in bringing the birds into good breeding condition. Further hints on the feeding and management of breeding birds are given in Leaflet No. 83.

Blood-Testing of Poultry.—The importance of having the breeders blood-tested for the elimination of "carriers" of Bacillary White Diarrhoea disease may again be stressed. Success in chicken-rearing cannot be obtained unless blood-tested, disease-free parent stock is used. "Carriers" of the disease should be sold off for table purposes immediately they are detected. If not already done, arrangements should be made with the Poultry Instructor for the district to have blood-testing carried out without delay. Eggs which are purchased for hatching should be obtained only from farms where it is definitely known that all the birds have been blood-tested and are free from the disease. In this connection, it is important to note that a flock cannot be regarded as free from carriers if one or more reactors are found at the first test, and retesting of those which pass is not carried out. No poultry keeper should purchase eggs for hatching from anybody who cannot produce the testing report or from anybody whose testing report shows the presence of reactors.

Fattening of Turkeys.—Turkeys, intended for the Christmas market, should be liberally fed from now onwards. Two feeds of soft mash, wet with separated milk or buttermilk, if available, should be given daily, while a supply of grain should be fed in the evening just before the birds go to roost.

It is a good plan to select the birds for breeding before the fattening of the general flock commences. The selected birds should be kept apart from the fattening flock, if possible, and fed on body building foods instead of fattening foods so as to maintain them in a hard, fit condition. If stubble ground is available, the turkeys to be kept for breeding purposes can with advantage be placed on it in a portable house. One feed daily of mash will be sufficient in such circumstances until the birds show signs of returning to the house in the evenings with empty crops when additional feeding of grain will be necessary.

Table Chickens.—This is a good time to hatch eggs for the production of table chickens as the birds will be ready for market at a time when the demand and price are likely to be good. Eggs of a table breed, such as the Light Sussex or of crosses between that breed and a general purpose breed such as the Wyandotte or Rhode Island Red should, if possible, be hatched for this trade.

Keeping Eggs Clean.—Before the winter days arrive and the inevitable moist conditions which they bring, it is desirable to take the necessary

precautions to ensure that the eggs will not be soiled unduly by the birds. Simple methods of management and of arrangement as regards the housing will largely prevent the appearance of soiled eggs. It is chiefly a matter of keeping the floor of the house, the nest boxes and the ground around the house, clean so that the hens' feet will remain clean. See Leaflet No. 27 for further particulars.

ANNOUNCEMENTS AND REMINDERS.

GENERAL.

Winter Agricultural Classes.—The centres selected by County Committees of Agriculture for Winter Agricultural Classes, beginning in early November, are:—

County Antrim	..	Bushmills; Ahoghill; Crumlin and Creavery.
County Armagh	..	Cavanbellaghy and Tullyherron.
County Down	..	Sixroadends; Killyleagh; Newry and Kilkinamurray.
County Fermanagh	..	Knockaraven and Tubrid.
County Londonderry	..	Garvagh and Articlave.
County Tyrone	..	Clanabogan; Dunmoyle (Clogher); Donemanagh; Killeter; Aghnahoe (Ballygawley); and Kilnaslee (Donaghmore).

The instructions given at these classes is of a very practical kind and capable of being applied to everyday work on the farm. Young men residing in the districts mentioned above are strongly advised to avail themselves of the opportunity of obtaining the free instruction which is provided. Full particulars regarding the subjects dealt with are given in Leaflet No. 60. The Secretary, or Agricultural Organiser of the County Committee of Agriculture, or the Agricultural Instructors, will give particulars regarding opening dates, etc., on request.

County Poultry Stations.—The egg distribution season at County Poultry Stations begins on 1st November. Lists giving the names and addresses of station-holders in each County will be available soon and may be had from the Secretary, or Agricultural Organiser, of the County Committee of Agriculture, free, on request.

Autumn Sheep Dipping.—Sheep owners are reminded that the autumn sheep dipping period began on the 4th October and extends to the 12th November. During this period all sheep must be double-dipped, allowing an interval of not less than seven or more than fourteen days between the two dippings.

LEAFLETS.—Copies of the leaflets mentioned in this report are obtainable free on request.

LECTURES.

The following lectures, arranged by County Committees of Agriculture, on the Land Fertility Scheme and other Agricultural matters, will be given by the Agricultural Instructors.

County.	Day and Date.	Centre.	Time.
Antrim	Fri. 15th Oct.	Ballycraigy P.E. School.	8-0 p.m.
,,	Mon. 18th Oct.	Sullatober P.E. School.	do.
,,	Wed. 20th Oct.	Market Hall, Crumlin.	do.
,,	Fri. 22nd Oct.	McBride Memorial Hall, Dundrod.	do.
,,	Mon. 25th Oct.	Derriaghy P.E. School.	do.
,,	Wed. 27th Oct.	Kilbride P.E. School.	do.
Armagh	Fri. 15th Oct.	Drumsallen P.E. School.	8-0 p.m.
Down	Fri. 15th Oct.	Carrowdore Orange Hall.	8-0 p.m.
,,	Tues. 19th Oct.	Memorial Hall, Comber.	8-15 p.m.
,,	Wed. 20th Oct.	St. Mary's Hall, Burren, Warrenpoint.	8-0 p.m.
,,	Fri. 22nd Oct.	Closkelt P.E. School, Katesbridge.	do.
,,	Thurs. 28th Oct.	Fourtowns P.E. School, Loughbrickland.	do.
,,	Fri. 29th Oct.	Donaghmore P.E. School, Newry.	do.
,,	Thurs. 28th Oct.	Orange Hall, Sixroadends.	do.
,,	Mon. 1st Nov.	Minor Hall, Downpatrick.	do.
,,	Tues. 2nd Nov.	Old School, Moneyrea.	do.

Farmers residing in the vicinity of the centres mentioned above are strongly advised to attend the lectures so that they may become familiar with the provisions of the Land Fertility Scheme, and full advantage taken of the opportunities given to improve soil fertility.

SCHOLARSHIP WINNERS, 1937.

The following are the names of the successful candidates for Scholarships in Agricultural and Horticultural Science and in Creamery Management, which were offered for competition in Northern Ireland this year:—

AGRICULTURAL SCIENCE.

Four Scholarships in Agricultural Science, each of a total value of £380 and tenable at Queen's University, Belfast, were awarded by the Ministry, one of the same value by the Royal Dublin Society under the terms of the Anne Hall Bequest Scheme and one of the value of £400 by the Queen's University, Belfast, under the terms of the Gibson Bequest Scheme. The names of the successful candidates are:—

V. Courtney, Tonitygorman, Magheraveely, County Fermanagh.
(Ministry's Scholarship)

D. Cowan, Drumantime, Poyntzpass, County Down.
(Gibson Scholarship)

John Lowe, Ferndale, Carryduff, Belfast.
(Ministry's Scholarship)

K. A. McDowell, Glenford, Larne, County Antrim.
(Ministry's Scholarship).

H. G. Montgomery, 20 Shandon Park, Knock, Belfast.
(Ministry's Scholarship)

T. J. Paul, Drumlamph, Bellaghy, County Londonderry.
(Anne Hall Scholarship)

Four of these successful candidates had completed the ordinary college course in agriculture at Greenmount Agricultural and Horticultural College, Muckamore, County Antrim.

Horticultural Science.

One Scholarship in Horticultural Science of a total value of £640 and tenable for three years at the University of Reading and for one further year at a Horticultural College to be selected by the Ministry, was awarded by the Ministry. The successful candidate was R. E. Johnston, Clogher, County Tyrone. This candidate had completed the ordinary college course in horticulture at Greenmount Agricultural and Horticultural College, Muckamore, County Antrim.

Creamery Management.

Two Scholarships in Creamery Management, each of a total value of £98 6s. 0d. and tenable at the University College, Cork, were awarded by the Ministry. The sucessful candidates were, John J. Simpson, Grovehill, Bally, Ballymena, County Antrim, and John Young, Lough Road, Ballymaguiggan, Magherafelt, County Londonderry.

SCHOOLS NEWS.

ULSTER DAIRY SCHOOL, COOKSTOWN.

The third term of the year 1937 terminated on the 1st October last and the results of the examinations held at the end of the term are announced:—

Miss S. M. Hamilton, Killycolp House, Tullyhogue, Dungannon, County Tyrone, who is pursuing the Senior course of training with a view to qualifying as a teacher, reached the standard for admission to the fifth term of the course.

Miss E. H. Brown, Ballyeglish, Moneymore, County Londonderry, who, during her fourth term at the School specialised in Dairying, qualified for the award of a Creamery Scholarship which entitles her to a period of twenty-four

weeks' training at a Creamery approved by the Ministry with a view to qualifying for the Ministry's Certificate of Competency in Creamery Butter-making.

Miss R. G. Walker, Hillhall, Lisburn, obtained first place for the third term class and reached the standard for admission to the Senior course of training with a view to qualifying as a teacher.

The following pupils who had completed the ordinary School course of three terms were successful in qualifying for certificates in Poultry-keeping, Dairying and Rural Housewifery:—

Miss A. E. Brown, Drogan, Killadeas, Ballinamallard, County Fermanagh.
Miss S. M. Dooher, Cleggan North, Donemana, County Tyrone.
Miss M. E. Greene, Drumbeggan, Monea P.O., Enniskillen, County Fermanagh.
Miss I. McM. Mann, Sunnyside, Ballygrainey P.O., County Down.
Miss D. McBride, Tanvally, Annaclone, Banbridge, County Down.
Miss M. McBride, Tanvally, Annaclone, Banbridge, County Down.
Miss A. G. McElroy, Corboe, Clogher, County Tyrone.
Miss R. A. Nugent, Ballintrain, Sixmilecross, County Tyrone.
Miss B. O'Hagan, Crossland, Garvagh, County Londonderry.
Miss H. C. Quinn, Drumfad, Ballygawley, County Tyrone.
Miss C. B. Starkie, The Quarter Farm, Killough, County Down.

Miss K. Corrigan, White Rocks, Church Hill, Enniskillen, was successful in qualifying for the Ministry's Certificate in Domestic Science.

The next term at the School will commence on 4th January, 1938. Applications for admission to this term are now being received by the Ministry, and girls who intend to take out a course of training should submit their applications to the Ministry as soon as possible, as equally eligible applicants are admitted to the School in the order in which their applications are received. There is no qualifying examination for admission. Copies of the prospectus, containing application forms, may be obtained free of charge from the Secretary of any County Committee of Agriculture, from the local Instructor in Poultry-keeping, from the Lady Superintendent, Ulster Dairy School, Cookstown, or from the Secretary, Ministry of Agriculture, Stormont, Belfast.

FIFTEENTH EGG-LAYING TEST, 1936-37.

LIST OF AWARDS.

The following is a statement showing the various winners of awards in the above test:—

AWARDS FOR PENS OF BIRDS.

SECTION 1. WHITE WYANDOTTES.

Section, Breed & Award.	Pen No.	Name and Address of Owner.	No. of Eggs laid by Pen.			
			Super Grade	1st Grade	Under 1st Grade	Score Value
1st (£8)	22	Mr. J. C. Stewart, Balloo, Killinchy, Co. Down.	1,008	342	44	1,350
2nd (£6)	10	Mrs. D. C. Gamble, Roan Lodge, Coalisland, Co. Tyrone.	854	452	25	1,306
3rd (£3)	3	Mrs. J. M. Brogden, Fernshaw, Dungannon, Co. Tyrone.	860	442	138	1,302
4th (£2)	4	Mr. R. A. Copeland, Blackskull, Dromore, Co. Down.	774	483	86	1,257
5th (£1-10)	5	Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh.	689	535	73	1,224

SECTION 2. WHITE LEGHORNS.

1st (£6)	33	Mrs. E. Johnston, Craigboy, Donaghadee, Co. Down.	1,006	210	19	1,216
2nd (£3)	35	Mr. W. D. Anderson, Ballyaugherty, Saintfield, Co. Down.	669	482	18	1,151
3rd (£2)	41	Mr. H. L. Brown, 57 Millisle Road, Donaghadee, Co. Down.	595	525	44	1,120

SECTION 3. RHODE ISLAND REDS.

1st (£8)	53	Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh.	790	624	64	1,414
2nd (£6)	64	Mr. H. Ramsey, Sylvan Cottage, Gilnahirk, Belfast.	353	911	152	1,264
3rd (£3)	63	Mr. W. Patton, The Hill, Loughries, Newtownards, Co. Down.	837	357	36	1,194
4th (£2)	52	Mrs. H. Getty, Hillcrest, Newtownards, Co. Down.	673	519	48	1,192
5th (£1-10)	62	Mrs. D. Patterson, Ballycastle Road, Coleraine, Co. Derry.	607	576	179	1,183

SECTION 4. ANY OTHER PURE BREED.

Section, Breed & Award.	Pen No.	Name and Address of Owner.	No. of Eggs laid by Pen.			
			Super Grade	1st Grade	Under 1st Grade	Score Value
1st (£6)	76	Mrs. H. Getty, Hillcrest, Newtownards, Co. Down. (Lt. Sussex)	485	689	115	1,174
2nd (£3)	75	Mrs. Martha Finlay, Langfield, Armoy, Co. Antrim. (Lt. Sussex)	709	459	230	1,168
3rd (£2)	84	Mrs. S. B. Nangle, Ballyeglish, Moneymore, Co. Derry. (Lt. Sussex)	695	341	148	1,036

SECTION 5(*a*), STATION-HOLDERS. WHITE WYANDOTTES.

1st (£6)	93	Mrs. C. E. Crooke, The Rocks, Blaney, Enniskillen, Co. Fermanagh.	613	778	142	1,391
2nd (£3)	91	Mr. W. A. Bell, Donaghanie, Beragh, Co. Tyrone.	632	610	143	1,242
3rd (£2)	99	Mrs. M. Rodgers, Ballyginney, Dundrum, Co. Down.	846	341	98	1,187

SECTION 5(*b*), STATION-HOLDERS. WHITE LEGHORNS.

1st (£4)	105	Mrs. J. Brown, Culcrum, Cloughmills, Co. Antrim.	844	298	55	1,142
2nd (£2)	112	Mrs. M. Noble, Roundpark House, Killycramph, Lisnaskea, Co. Fermanagh.	414	619	95	1,033

SECTION 5(*c*), STATION-HOLDERS. RHODE ISLAND REDS.

1st (£5-10)	127*	Mrs. H. McMaster, Lt. Ballymena, Broughshane, Co. Antrim.	999	249	26	1,248
	130*	Mrs. H. Rea, Lisowen, Crossgar, Co. Down.	978	270	11	1,248
3rd (£2)	124	Mrs. R. McGiffert, Rathcunningham, Toye, Co. Down.	639	532	41	1,171
4th (£1-10)	117	Mrs. R. J. Dunn, Ballyskeagh, Artigarvan, Co. Tyrone.	589	572	167	1,161

*As these two pens laid an equal number of scoring eggs, the first and second prizes are divided equally between them.

SECTION 6. CLUB ENTRIES.

Section, Breed & Award.	Pen No.	Name and Address of Club.	No. of Eggs laid by Pen.			
			Super Grade	1st Grade	Under 1st Grade	Score Value
1st (£6)	135	Aghadowey Poultry Club.	573	523	152	1,096

CHAMPIONSHIP CUP.

The Silver Cup offered by the Ministry in respect of the pen laying the greatest number of super-grade and first-grade eggs during the period of the Test was won by—Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh. (Pen No. 53, Rhode Island Reds, 1,414 super-grade and first-grade eggs).

OTHER AWARDS.

Awards for Type.—The three special awards of £2 each for pens of the best type of (1) White Wyandottes; (2) White Leghorns; and (3) Rhode Island Reds, amongst those which qualified for first-class certificates were won by the following:

White Wyandottes—Mrs. R. J. Beck, Cleight, Corbet, Banbridge, Co. Down. (Pen 2.)
White Leghorns—Mrs. E. Johnson, Craigboy, Donaghadee, Co. Down. (Pen 33.)
Rhode Island Reds—Mr. J. O. Turkington, Derryinver, Lurgan, Co. Armagh. (Pen 70.)

The award of £1 in respect of the pen of Light Sussex of the best type amongst the pens of that breed qualifying for first-class or second-class certificates was won by:—

Mrs. M. Finlay, Langfield, Armoy, Co. Antrim. (Pen 75.)

Winter Production Award.—The award of £2 offered in respect of the pen laying the greatest number of super-grade and first-grade eggs during the first four periods (16 weeks) of the Test was won by:—

Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh. (Pen No. 53 Rhode Island Reds 463 Super-grade and First-grade eggs.)

Scientific Poultry Breeders' Association's Cup.—The Challenge Cup offered by the Council of this Association in respect of the pen laying the greatest number of super-grade and first-grade eggs during the winter period, that is, from the commencement of the Test to the end of the sixteenth week, was also won by:—

Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh. (Pen 53.)

SILVER MEDALS PROVIDED BY THE NORTHERN IRELAND UTILITY POULTRY SOCIETY:—

The four Silver Medals provided by the Society for the best pens of (1) White Wyandottes, (2) White Leghorns, (3) Rhode Island Reds, and (4) any other pure breed of pullets, owned by members of the Society competing in the Test, have been won by:—

(1) Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh. Pen No. 5. White Wyandottes.

(2) Mrs. E. Johnston, Craigboy, Donaghadee, Co. Down. Pen No. 33. White Leghorns.

(3) Mr. H. Ramsey, Sylvan Cottage, Gilnahirk, Belfast. Pen No. 64. Rhode Island Reds.

(4) Mrs. H. W. Merrick, Agivey House, Aghadowey, Co. Derry. Pen No. 81. Light Sussex.

JOHN WATER'S PERPETUAL MEMORIAL CHALLENGE TROPHY.—The Silver Rose Bowl, known as the John Water's Perpetual Memorial Challenge Trophy, provided by the Irish Fancier's Association for competition among members who have birds in the Test, was won by:—

Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh. Pen No. 5. White Wyandottes.

On page 319 is the list of Awards of Medals for single birds.

MEDALS FOR SINGLE BIRDS.

Award.	Qualification.	Pullet No.	Pen No.	Owner and Breed.	Eggs laid.			
					Super Grade.	1st Grade.	Under 1st Grade.	Score Value.
Silver Medal	Best pullet in entire Test	317	53	Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh. *Rhode Island Red.*	222	71	1	293
Bronze Medal	Best pullet in Section 1.	128	22	Mr. J. C. Stewart, Balloo, Killinchy, Co. Down. *White Wyandotte*	169	104	7	273
Bronze Medal	Best pullet in Section 2.	208	35	Mr. W. D. Anderson, Ballyaugherty, Saintfield, Co. Down. *White Leghorn*	205	32	—	237
Bronze Medal	Best pullet in Section 4	448	75	Mrs. M. Finlay, Langfield, Armoy, Co. Antrim. *Light Sussex*	150	92	2	242
Bronze Medal	Best pullet in Section 5(*a*)	556	93	Mrs. C. E. Crooke, The Rocks, Blaney, Enniskillen, Co. Fermanagh. *White Wyandotte*	200	61	4	261
Bronze Medal	Best pullet in Section 5(*b*)	661	111	Mrs. J. Knox, Shanmullagh, Ederney, Co. Fermanagh. *White Leghorn*	114	164	4	278
Bronze Medal	Best pullet in Section 5(*c*)	762	127	Mrs. H. McMaster, Little Ballymena, Broughshane, Co. Antrim. *Rhode Island Red*	241	27	1	268
Bronze Medal	Best pullet in Section 6.	842	141	Crumlin Poultry Club. Owner : Mr. S A. Upton, Drumscill, Maze, Lisburn, Co. Antrim. *White Wyandotte.*	215	27	—	242

The champion pullet referred to above, which won the Silver Medal, was in Section 3.

PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of Feeding Stuffs at 1st October, 1937, in ten representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castlewellan	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
	s. d.	s d.	s. d.	s. d.	s. d.	s. d.	s. d.	s d.	s. d.	s. d.
PROTEIN FOODS :										
Linseed (whole)	12 0	18 0	16 0	16 0	20 0	18 6	20 0	16 6	20 0	17 0
Linseed Cake, home-made ..	—	12 0	11 6	12 0	11 0	—	12 6	11 3	11 9	—
Linseed Cake, foreign ..	10 0	10 6	—	10 6	—	12 6	11 0	9 6	11 0	10 6
Linseed Cake Meal	10 0	12 0	10 3	10 6	10 9	11 6	11 0	11 6	11 6	10 6
Cotton Cake, decorticated ..	10 3	—	9 6	10 6	10 3	10 0	10 0	10 6	—	10 6
Earthnut Cake, decorticated ..	10 3	—	10 0	9 6	—	10 3	9 0	9 6	10 0	—
Soya Bean Meal (extracted) ..	11 0	11 0	11 6	11 6	—	11 6	11 6	11 3	11 0	11 9
Fish Meal (60% protein) ..	17 0	16 6	16 0	16 0	—	16 6	16 6	16 3	16 6	16 6
Meat Meal (60% protein) ..	16 6	16 0	14 9	—	16 3	17 0	16 0	16 0	15 6	—
Meat and Bone Meal (40% protein)	—	11 6	—	10 0	—	13 0	12 6	—	—	11 9
MEDIUM PROTEIN FOODS :										
Palm Kernel Cake	9 3	—	—	7 9	—	—	—	—	9 6	—
Palm Kernel Meal	—	9 6	9 6	7 9	—	9 9	—	—	—	—
STARCHY FOODS :										
Maize (whole)	7 4½	7 9	7 9	7 0	7 9	7 9	7 3	7 6	—	7 3
Maize Meal	7 10½	8 0	7 9	7 9	8 0	7 9	7 6	8 0	7 9	7 9
Maize, Flaked	8 3	8 9	8 3	8 3	8 3	8 6	8 6	8 6	8 9	8 3
Wheat (whole)	13 0	10 0	11 0	10 0	11 6	12 6	—	11 0	—	—
Bran, Red	8 9	9 6	8 6	9 0	—	8 9	8 9	9 6	9 0	8 9
Bran, White	10 0	10 6	9 7½	10 0	9 6	10 0	10 0	10 6	10 6	11 6
Pollard, Brown	8 9	9 6	8 9	9 0	—	9 3	9 0	9 6	9 0	8 9
Pollard, White	—	10 0	9 10½	10 0	10 0	10 0	10 0	10 6	10 0	11 6
Barley Meal	10 3	10 6	9 6	9 6	9 6	10 0	9 6	10 9	10 6	10 6
Tapioca Root Flour	8 0	9 0	8 6	—	—	8 6	8 6	—	—	—
Oats (whole)	10 6	9 0	8 0	10 6	7 0	7 6	8 0	9 4	7 0	7 0
Crushed Oats	11 6	10 0	8 6	11 0	7 6	8 0	—	10 4	—	7 6

NON-CONCENTRATES :—The average prices at representative markets at the beginning of October, were as follow :— Potatoes (Main Crop), 2/10d. per cwt. ; Upland Hay, 62/8d. per ton ; Oat Straw, 42/6d. per ton.

AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail cash prices per cwt. of feeding stuffs at 1st October, 1937, with comparative prices as at the first of the previous month; the costs per unit of protein equivalent and of starch equivalent are also given in respect of each month.

	Protein equivalent	Starch equivalent	Average price per cwt. at		Cost per unit of Protein equivalent		Cost per unit of starch equivalent	
			1st Oct.	1st Sept.	October	Sept.	October	Sept.
Protein Foods			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed ..	19.0	119.0	17 5	17 0½	18 4	17 11	2 11	2 10½
Crushed linseed	19.0	119.0	18 10	18 10	19 10	19 10	3 2	3 2
Linseed cake (home-made)	25.0	72.0	11 9	11 8	9 5	9 4	3 3	3 3
Linseed cake (foreign)	25.0	72.0	10 8	10 6½	8 6½	8 5	3 0	2 11
Linseed cake meal	25.0	72.0	10 11½	10 11½	8 9	8 9	3 1	3 1
Decorticated Cotton cake	35.0	71.0	10 2	10 1	5 10	5 9	2 11	2 10
Decorticated Earthnut cake	41.0	73.0	9 9	9 10	4 9	4 10	2 8	2 8
Extracted Soya Bean meal	38.0	64.0	11 4	11 4	5 11½	5 11½	3 7	3 7
Fish meal (60% protein)	53.0	59.0	16 5	16 5	6 2	6 2	5 7	5 7
Meat meal (60% protein)	55.0	61.0	16 0	16 2	5 10	5 11	5 3	5 4
Meat & bone meal (40% protein)	36.0	44.0	11 9	11 8	6 6	6 6	5 4	5 4
Medium Protein Foods								
Palm kernel cake	17.0	75.0	8 10	9 1½	10 5	10 9	2 4	2 5
Palm kernel meal	17.0	75.0	9 1½	9 1½	10 9	10 9	2 5	2 5
Starchy Foods								
Maize	6.8	81.0	7 6	7 5½	22 1	21 11	1 10	1 10
Maize meal	6.8	81.0	7 10	7 9	23 0	22 10	1 11	1 11
Flaked maize	8.6	83.0	8 5	8 4	19 7	19 4½	2 0	2 0
Wheat	9.6	72.0	11 3	11 5	23 5	23 10	3 1	3 2
Red bran	10.0	43.0	8 11	8 10	17 10	17 8	4 2	4 1
White bran	10.0	43.0	10 3	10 2½	20 6	20 5	4 9	4 9
Brown pollard	11.0	60.0	9 1	8 11	16 6	16 2½	3 0	3 0
White pollard	11.0	60.0	10 2½	10 3	18 7	18 7½	3 5	3 5
Barley meal	7.0	70.0	10 1	10 3½	28 10	29 5	2 11	2 11½
Oats	7.6	60.0	8 4	10 0	21 11	26 4	2 9	3 4
Crushed oats	7.6	60.0	9 3½	10 8	24 5	28 1	3 1	3 6½
Tapioca root flour	1.0	83.5	8 6	8 7	170 0	171 8	2 0	2 0½
Non-Concentrates								
Potatoes	0.6	18.0	2 10	3 7	94 5	119 5	3 2	4 0
Upland hay	4.9	24.0	3 1½	3 6	12 9	14 3	2 7	2 11
Oat Straw	0.9	20.0	2 1½	2 5	47 3	53 9	2 1	2 5

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a

guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately 2½ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk, and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

	Water.	Protein.	Oil.	Carbohydrates.
Non concentrates				
Swede turnips ..	88	1	0.2	9
Potatoes ..	75	2	0.1	21
Cabbage ..	89	1.5	0.5	8
Oat Straw ..	14	4	2	37
Meadow hay ..	10	10	3	45
Pasture grass ..	80	3.5	0.8	10
Fattening Foods				
Crushed oats ..	13	9	6	60
Maize meal ..	12	10	4	70
Barley meal ..	13	12	2	66
Pollard ..	13	15	5	57
Flesh forming foods				
Decorticated Cotton cake ..	9	40	9	26
Decorticated Earthnut cake ..	10	46	7	23
Meat meal ..	11	60	6	—
Soya bean meal ..	11	44	1.5	32

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered:

(1) the quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.

(2) The physical condition of the foods, and if fresh or stale.

(3) The suitability of the foods for the purpose in view.

(4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be considered specifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of the food-stuff. It is a measure of the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given on the table on page 321, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

(1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 321 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Decorticated cotton cake	...	...	5/10d.
Decorticated earthnut cake	...	...	4/9d.
Soya bean meal	...	...	5/11½d.

Accordingly decorticated earthnut cake is the cheapest source of protein.

(2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows :—

Soya bean meal	...	...	5/11½d.
Meat meal (60% protein)	...	...	5/10d.
Meat and bone meal (40% protein)	...		6/6d.

Therefore meat meal (60% protein) is the cheapest source of protein amongst the purchased foods suitable for pigs. This example shows also how the price per ton may mislead a purchaser into thinking he is being economical when he buys at the cheapest price. The 60% meat meal costs 4/3d. per cwt. more than the 40% meat and bone meal, and yet it is a cheaper source of protein than the latter. Besides, a lesser proportion in the meal mixture will suffice, and having usually a lower content of oil than the 40% grade, it is likely to prove more satisfactory than that grade, both from the thriving point of view and its effect on the quality of the bacon.

(3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases has been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

PRICES OF FERTILISERS.

The prices per ton of certain phosphatic manures at Belfast stores are as follow :—

Basic Slag (19% Phos. Acid)	...	£3	10 0
Gafsa Rock Phosphate ...	...	£2	15 0
Semsol	...	£3	2 6

PRICES OF FAT STOCK.

The following were the average prices per live cwt. of bullocks and heifers, sold at Belfast Auction Marts during each of the four weeks ended 28th September, 1937.

Week ended.	Bullocks.		Heifers.	
	s.	d.	s.	d.
7th September ...	40	0	40	6
14th September ...	38	3	37	9
21st September ...	37	3	37	0
28th September ...	36	9	36	0

If the information you require is not obtainable in these pages, write to the Secretary, Ministry of Agriculture, Stormont, (Room 401), Belfast.

PRICES OF LIVE STOCK.

Average prices of Live Stock at Fairs during the month of September, 1937.

Date	Fair	Calves (under 9 months)	Store Cattle	Fat Cattle (18 months and over)	Springers		Milch Cows	Fat Lambs (under 12 months old)	Fat Sheep (over 2 years old)	Young Pigs
					Cows	Heifers				
		Per head £ s.	Per cwt. Live weight.	Per cwt. Live wgt.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.
1	Rathfriland ..	6 12/6	39/– to 41/–	39/–	20 0	16 0	17 0	*1 13	—	1 0
2	Ballymoney ..	6 7/6	39/9 to 44/6	—	19 15	18 17/6	17 10	*2 12	—	1 11
2	Strabane ..	4 10	39/– to 41/–	38/6	—	—	15 0	*1 17/6	—	—
3	Moy	—	36/– to 43/–	37/–	16 2/6	17 2/9	16 6/3	*1 18/9	—	—
4	Londonderry ..	—	32/– to 40/–	—	17 5	—	—	—	—	—
7	Omagh ..	7 0	38/– to 43/–	38/6	16 10	15 10	16 0	*1 19	*1 15	—
8	Crossgar ..	—	41/– to 44/–	—	18 10	—	16 0	—	—	1 15
8	Irvinestown ..	6 7/6	41/3 to 42/6	37/–	16 10	16 0	15 0	‡2 2/6 *1 13/–	—	1 13
8	Kilrea	6 6/9	30/– to 41/–	38/–	18 0	—	17 0	*1 12/6	—	1 7/6
10	Ballygawley ..	—	32/– to 44/–	36/–	18 0	—	17 0	—	—	1 15
10	Enniskillen ..	5 11	32/– to 40/–	35/–	16 0	15 0	14 0	‡1 14 *1 19	‡1 15	1 18
14	Dungiven ..	—	32/– to 39/6	37/6	17 0	—	—	—	—	1 6/6
15	Lisnaskea ..	5 4/6	31/– to 42/–	39/–	17 10	16 5	16 0	—	—	1 19
16	Ballynahinch ..	—	37/– to 39/–	—	19 10	17 10	17 0	†1 17	‡1 15	1 17/6
18	Portadown ..	5 4	33/– to 38/–	34/6	17 0	17 0	20 0	—	—	1 12/6
20	Camlough ..	5 0	32/– to 40/–	34/–	17 10	18 0	15 0	*1 13	—	—
21	Moneymore ..	7 5/9	32/6 to 40/–	33/–	17 0	16 0	20 0	*1 15	*2 0 †1 7/6	2 2
22	Fintona ..	6 10	38/– to 41/–	37/–	17 0	15 0	15 0	*2 0	*2 0	1 15
24	Castlederg ..	4 5	35/6 to 38/6	38/–	16 0	—	—	*1 12/6	—	1 12/6
24	Killylea ..	—	38/– to 45/–	33/–	18 0	—	16 10	—	—	—
25	Ballymena ..	7 2/6	27/– to 41/–	—	21 10	21 0	19 10	—	—	1 13
30	Antrim ..	—	35/– to 40/–	33/6	24 0	20 0	19 0	—	—	1 10

* Downs and Cross. ‡ Long Wools. † Mountain.

SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland ports during the following periods:—Months of September, 1937, August, 1937, September, 1936; Nine months ended 30th September, 1937, and 30th September, 1936.

PORTS OF :—	CATTLE.						SHEEP.				PIGS.			
	Fat	Stores	Milch Cows	Springers.	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	Horses
Belfast	3,012	5,944	2,169	84	—	11,209	8,540	—	—	8,540	5,375	—	5,375	168
Larne	—	1,248	8	18	—	1,274	3,152	—	—	3,152	1,518	271	1,789	18
Londonderry ...	107	5,480	92	72	20	5,771	3,445	228	—	3,673	334	—	334	3
Newry	16	193	—	6	—	215	277	—	—	277	—	—	—	—
Total, September, 1937 ...	3,135	12,865	2,269	180	20	18,469	15,414	228	—	15,642	7,227	271	7,498	189
Total, August, 1937 ...	3,187	11,661	2,284	256	44	17,432	169	9	25,807	25,985	7,550	224	7,774	227
Total, September, 1936 ...	5,220	14,768	2,138	164	249	22,539	22,473	230	—	22,703	3,250	280	3,530	292
Total, Nine months ended 30th September, 1937 ...	44,175	147,011	13,294	1,844	3,537	209,861	33,550	336	78,398	112,284	101,235	2,453	103,688	2,711
Total, Nine months ended 30th September, 1936 ...	58,278	130,230	12,526	1,819	12,535	215,388	29,065	435	109,587	139,087	34,209	684	34,893	4,240

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 31st August, 1937, and the eight months ended 31st August, 1937, with comparative figures for the corresponding periods in 1936. This information also includes trade with the Irish Free State across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY.	IMPORTS.				EXPORTS.			
	Month ended 31st August	Month ended 31st August	8 months ended 31st August	8 months ended 31st August	Month ended 31st August	Month ended 31st August	8 months ended 31st August	8 months ended 31st August
	1937	1936	1937	1936	1937	1936	1937	1936
Bacon ... ... cwt.	3,789	2,826	25,117	23,396	32,561	28,616	229,109	253,762
Hams ... ... cwt.	1,929	1,792	12,245	14,995	9,430	11,518	79,691	93,714
Pork ... ... cwt.	215	505	3,806	8,266	2,222	1,168	22,739	26,045
Butter ... ... cwt.	17,530	16,797	146,101	145,752	429	1,369	2,160	4,565
Eggs ... ... gt. hds.	54,635	54,033	722,858	979,534	299,546	287,766	2,597,835	2,731,063
Oat Products (inc. Oatmeal)cwt.	2,379	3,429	16,029	19,416	3,368	2,032	54,403	49,914
Potatoes ... ... tons	1	—	6,042	10,908	*1,125	*1,404	*136,456	*167,022
Poultry ... ... cwt.	96	121	2,227	3,016	11,833	6,452	128,773	116,109
Grass Seeds ... cwt.	42	1,241	6,739	9,292	2,579	4,115	235,438	283,469

* These figures represent the quantities of potatoes inspected for shipment by the Ministry of Agriculture.

There were no imports of oats direct through Northern Ireland ports from abroad during the month of August, 1937. The imports of oats direct from abroad during August, 1936, amounted to 2,857 cwts.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 21 fairs in Northern Ireland during the months of September, 1936, and August and September, 1937 :—

Description of Live Stock.	September, 1936.		August, 1937.		September, 1937.	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ...	6,537	4,629	5,955	4,725	7,256	4,936
Fat Cattle ...	1,464	1,298	938	883	1,114	880
Dairy Cattle ...	1,556	1,228	1,283	1,021	1,450	1,163
Sheep ...	3,015	2,172	671	474	3,355	2,517
Lambs ...	3,236	2,608	3,634	2,970	4,713	3,724
Young Pigs ...	2,981	2,491	2,777	2,455	3,018	2,492

Increased numbers of store cattle were offered at fairs last month, and as a general rule the stock was of moderately good quality. Buyers were less active and seemingly reluctant to make purchases except at reduced rates, with the result that trade deteriorated and prices fell by 10/- to 20/- per head on the month. The best enquiry was for strong polly bullocks in forward condition ready for finishing, and choice heifers suitable for breeding at slightly easier prices, whilst small cattle showing quality were in fairly good demand locally. A large proportion of the offerings were left unsold. Fat cattle were about average turnouts for the time of year, and here again trade was much slower than of late and prices easier. Most of the animals were of a good standard of quality and shown in fairly good condition, but when purchasers' requirements were satisfied a fair percentage were left over. The best types of well-finished, medium-weight bullocks and heifers of from 8 to 9 cwt. were the chief attractions at from 33/- to 35/- per live cwt. Dairy cattle offerings increased to just below normal dimensions, but really good young springing cows and heifers were almost as scarce as in recent months. Most of these were bought up readily for shipping at prices showing rises up to £1 per head, whilst the strong home enquiry for well-uddered stock also brought about good clearances at firm rates. Large seasonal increases occurred in the numbers of sheep and lambs offered at fairs. Trade generally was good, with breeding ewes and lambs most in favour. Prices in this section were a little cheaper on the month, except in the case of best types of breeding animals. Young pigs were in good supply at most fair centres, and a good, steady demand ruled for suitable types, and prices advanced to around 34/- each. Sows for breeding remained a relatively small and quiet trade, and prices obtained for suitable types, where altered, were in seller's favour. Store pigs were a fairly good trade, but the volume of business was even more limited on account of the general tendency to purchase younger stock.

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„ 6. The Packing of Apples in Standard Boxes.
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„ 43. Tuberculosis in Poultry.
No. 44. Results of Crop Experiments, 1935.
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„ 46 Hints for Winter Egg Production.
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CIRCULARS.

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„ 9. Smut in Oats.
„ 10. Purchase of Fertilisers and Feeding Stuffs.
„ 11. Fertilisers and Feeding Stuffs Act—General Summary.
„ 12. The Treatment of Liver Fluke.
„ 13. The ox-Warble Fly.
„ 306. Fertilisers and Feeding Stuffs Act, 1926—Revision of Regulations.

MISCELLANEOUS PUBLICATIONS.

Store Cattle.
Reports on Egg-Laying Tests.
Crop Insurance.
List of Growers of Certified Crops of Immune Varieties of Potatoes.
List of Growers of Certified Crops of Non-Immune Varieties of Potatoes.
The Ministry's Monthly Report.
Register of Premium Stallions.
Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
Guide to the Marketing of Fruit Act (Northern Ireland), 1932.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated :—

(1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
(3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(4) The Agricultural Output of Northern Ireland, 1925. Price 2/6 net.

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